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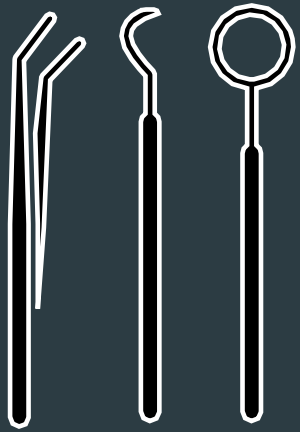
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Increasing Oral Health Care for the Elderly in Plattsburgh, NY

Megan Prue

July-August 2020

Preceptor: Dr. Maegan Cabrera



2A - Why Proper Oral Care is Important

- ▶ Oral health care in the elderly is an essential part of medical care that is often overlooked. Physicians typically ask about vision changes and if you're seeing an eye doctor, but sometimes asking about how often you see the dentist slips their mind.
- ▶ Recent studies have shown that poor oral hygiene is linked with higher rates of pneumonia in the elderly. Pneumonia is a serious illness in the elderly, often leading to severe functional impairments or even death.
- ▶ Aspiration pneumonia results from two factors: colonization of respiratory pathogens in the mouth and impaired oropharyngeal and gastroesophageal motility. The latter is often addressed in family medicine, but the former requires the help of dental professionals. Plaques on the teeth, resulting from poor oral hygiene, are composed of bacteria that can be aspirated into the lungs leading to aspiration pneumonia.¹
- ▶ Without regular dental cleanings, periodontitis, a chronic inflammation of the tissue around the teeth, can lead to colonization of the oral cavity with respiratory pathogens, making pneumonia infections, especially aspiration pneumonia, much more likely.²
- ▶ With poor oral hygiene and the buildup of plaque, keeping one's natural teeth can be very difficult. Natural dentition can be a major advantage in maintaining good mastication abilities. Without good dentition, poor nutrition can result. Malnutrition places individuals at increased risk of acquiring serious infections, including pneumonia.³
- ▶ Elderly individuals with dentures still need routine dental care as much as those patients with their own natural teeth. Improper denture care can lead to ulcerated mucosal surfaces, increasing the chances that malnutrition will result due to pain from eating.⁴ This, in turn, can lead to higher rates of pneumonia.
- ▶ Dentures should be removed at night due to the decrease in saliva and increase in bacteria while we sleep. One study found that wearing dentures while sleeping doubles the risk of pneumonia in the very elderly.⁵ Counseling about proper denture removal at night is something that will be addressed by dental professionals but is good for medical professionals to be aware of and discuss with patients when appropriate.

2B - Description of Need in Plattsburgh, NY

- ▶ Clinton county has higher rates of pneumonia in the elderly than the average county in NY making this an ideal place to have an intervention to help lower pneumonia rates in the elderly
 - ▶ Rates of pneumonia/flu hospitalizations, ages 65 plus, per 10,000 population are also higher than the rates for the ARHN (Adirondack Rural Health Network) region and for Upstate New York⁷
- ▶ From 2008-2010, rates of pneumonia in Clinton county, ages 65 plus, per 100,000 population, averaged 257.4 individuals compared to:
 - ▶ 150.1 in ARHN
 - ▶ 140.1 in Upstate NY
 - ▶ 127.9 NY state as a whole
- ▶ The upcoming health needs assessment (2019-2021) estimates that these rates are still similar today, proportionally to each other, with lower rates in all areas. Not enough data has been collected on pneumonia hospitalizations yet, so they were not included in the intervening health needs assessment
- ▶ The image to the right is included in the preliminary 2019-2021 Clinton Country Health Needs Assessment



The age-adjusted rate of ER visits due to **immunization - preventable flu and pneumonia** in Clinton County is more than **double** the New York State rate.

Source: NY Statewide Planning & Research Cooperative System

3 - Public Health Cost

- ▶ To increase dental visits in elderly residents of Plattsburgh, NY, very minimal cost would be required
 - ▶ Cost of time per visit to ask patients about their dental care
 - ▶ Cost to print pamphlets to provide patients a list of local dentists
- ▶ However, with this little bit of upfront cost of time and money, there can be a huge reduction in health care dollars spent by keeping patients out of the hospital due to pneumonia infections
 - ▶ At CVPH, a hospital stay for simple pneumonia in elderly patients on Medicare averages \$28,132⁷
 - ▶ In the past year there were 70 admissions at CVPH for simple pneumonia in this population group⁷
 - ▶ Compare that cost to routine dental cleanings, which were quoted to be on average \$150-200 without insurance, and possibly free with insurance, for local dental offices
 - ▶ This means a saving of about \$28,000 by preventing pneumonia hospitalization in one elderly patient



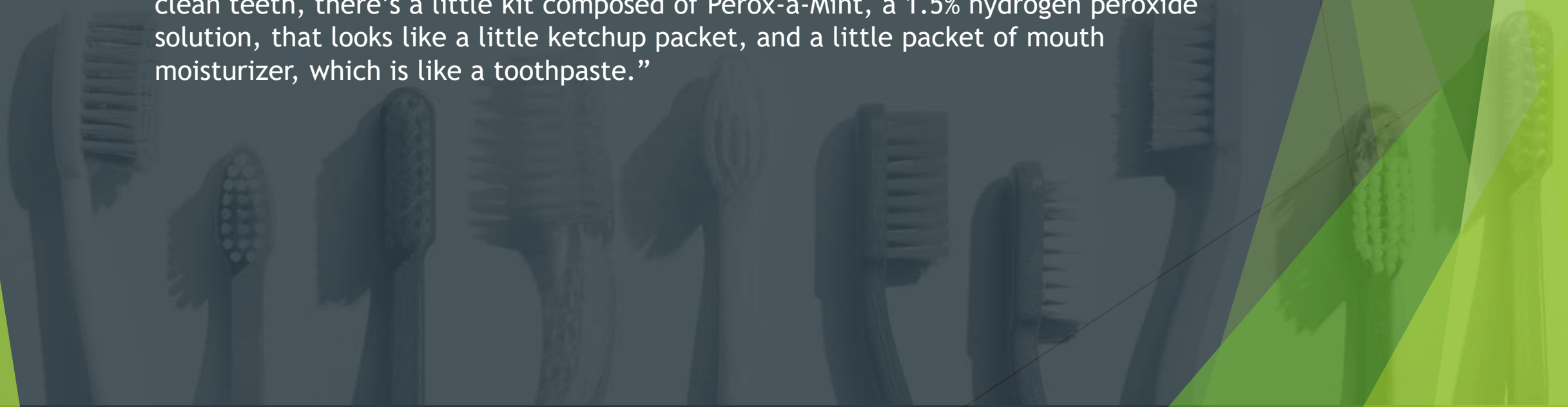
4A - Community Perspective

- ▶ Dr. Tom Gerner DDS, Dentist at True North Dentistry in Plattsburgh, NY
 - ▶ “Some people don’t find value in cleaning their teeth when they get older. Lots of older adults have dry mouth symptoms causing their gums to get stickier, which can lead to and aggravate periodontal disease, so they can’t chew foods and meals are no longer pleasant to them. My philosophy is, though, that when you are older, one of the things you still can do and should be able to do is eat.”
 - ▶ “Some older patients have deep seeded fears of dentists from when they were young and that can be really hard to overcome.”



4B - Community Perspective

- ▶ Stephanie Griffin RN, Charge Nurse in the ICU at CVPH in Plattsburgh, NY
 - ▶ In the quotes below, Stephanie explains the types of care they take in the ICU as a form of oral decontamination to limit respiratory pathogens in the mouth and prevent aspiration pneumonia in ventilated patients, many of whom are elderly
 - ▶ “When we have a ventilated patient, Peridex, a 0.12% chlorhexidine oral solution, is built in to be ordered every shift, so it will be performed once every 8 hours.”
 - ▶ “We assess every intubated patient every 2 hours for proper mouth care. Some will need more assistance depending on their dentition and oral secretions. When needed to clean teeth, there’s a little kit composed of Perox-a-Mint, a 1.5% hydrogen peroxide solution, that looks like a little ketchup packet, and a little packet of mouth moisturizer, which is like a toothpaste.”



5 - Intervention and Methodology

1. Presentation to CVPH family medicine residents explaining why oral health care is so important in the elderly and why increasing dental visits can help contribute to lower rates of pneumonia
2. Create a pamphlet of local dental providers in Plattsburgh with their addresses, phone numbers and what type of insurance they accept to make finding a dentist much easier for patients



6 - Response

- ▶ CVPH family medicine residents welcomed the information about the links between poor oral health in the elderly and increased rates of pneumonia
 - ▶ Hopefully, this will translate into their practices with promotion of dental visits every 6 months for their elderly patients
 - ▶ Residents were given the pamphlet at this time to further peruse and determine how to best utilize in their practice
- ▶ Without time to observe the implementation and distribution of the pamphlet, I can only predict that the elderly patients who are provided this information will utilize it to increase their awareness of proper dental care needs and increase their likelihood of beginning or continuing to regularly see a dentist

7 - Effectiveness and Limitations

► Effectiveness

- Residents at CVPH Family Medicine are now more cognizant of the links between poor oral health in the elderly and pneumonia
- Almost every dental office in Plattsburgh is now included on a pamphlet available to patients looking for a dental home
 - A few offices are still closed due to COVID-19 and were unable to connect with me at this time
 - A few offices are only open for emergencies due to COVID-19 and are not taking new patients currently, so I did not include them in the pamphlet

► Limitations

- Many offices were not able to give concrete answers and assert that they accept all insurances, but the out of pocket cost to patients is unknown
- Plenty of patients would rather seek dental care in one of the surrounding towns/cities instead of directly within Plattsburgh

8 - Recommendations for Future Projects



Expand the local dentist provider and insurance pamphlet to include dentists in the surrounding towns/cities outside of Plattsburgh



Check at follow-up visits if patients have used the list of dental providers to find a dentist



If not, gather data on why they did not see a provider

This could prompt other interventions that address these barriers to dental care:

- Transportation
- Timing of appointments
- Insurance

9 - References

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